

CLAIMS

1. A digital content distribution system comprising a right management server and a user terminal which are connected to each other via a communication network, said right management
5 server issuing, to the user terminal, license information for permitting a user to use a content, and said user terminal using the content based on the license information obtained from the right management server,

wherein the right management server includes:

10 a first condition generation unit operable to generate a first condition based on a content use right owned by the user, said first condition being a condition for permitting the user to use the content;

15 a second condition generation unit operable to generate a second condition that indicates a part or all of the use permitted under the first condition and indicates whether the license information is valid or invalid based on a logical product of the first condition and said second condition;

20 a license generation unit operable to generate the license information including the first condition and the second condition in response to a license obtainment request from the user terminal; and

25 a license issuance unit operable to issue the generated license information to the user terminal so that said user terminal obtains said license information, and

the user terminal includes:

a license obtainment requesting unit operable to request the right management server to issue the license information so as to obtain said license information;

30 an invalidity judgment unit operable to judge whether the license information is invalid or not based on the first condition and the second condition included in the obtained license information;

and

a using unit operable to provide the use of the content to the user when it is judged that the license information is not invalid.

- 5 2. The digital content distribution system according to Claim 1,
 wherein the user terminal further includes a license
information returning unit operable to return the license
information to the right management server when it is judged that
the license information is invalid, and

10 the right management server further includes:

a return acceptance unit operable to accept, from the user
terminal, return of the license information which is judged to be
invalid;

15 an invalidation cancellation unit operable to cancel
invalidation of the license information by updating the second
condition included in the returned license information to a new
value; and

a reissuance unit operable to reissue, to the user terminal,
the license information of which invalidation is cancelled.

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3. The digital content distribution system according to Claim 2,
 wherein the user terminal further includes a history
information storage unit operable to generate history information
indicating a history of the use of the content when said content is
25 used by the using unit, and store the generated history information,
and

the license information returning unit transmits the license
information to be returned, together with the stored history
information, to the right management server.

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4. The digital content distribution system according to Claim 3,
 wherein the second condition is represented by a maximum

allowable number of uses of the content which is counted when said content is used after a date when the license information is issued.

5 5. The digital content distribution system according to Claim 3,
 wherein the second condition is represented by an expiry
 date of a validity period of the content which starts on a date when
 the license information is issued.

10 6. The digital content distribution system according to Claim 3,
 wherein the second condition is represented by a subset of
 the first condition, said subset being either a maximum allowable
 number of uses which is not more than a maximum allowable
15 number of uses indicated in the first condition or an expiry date
 which is earlier than an expiry date indicated in the first condition.

 7. The digital content distribution system according to Claim 2,
 wherein the invalidity judgment unit judges whether the
 license information is invalid or not based on the updated second
20 condition included in the reissued license information.

 8. The digital content distribution system according to Claim 1,
 wherein the using unit includes a condition updating unit
 operable to update each of the first condition and the second
25 condition to a new value obtained by subtracting a value of the use
 right which is consumed under the provision of the use, every time
 the content is used.

 9. The digital content distribution system according to Claim 1,
30 wherein the license information includes an item of a usage
 amount into which the number of actual uses of the content is
 recorded with a default value being 0, when the content is used

based on the license information,

the invalidity judgment unit judges whether the license information is invalid or not by comparing between a value of the second condition and a value of the item of the usage amount, both of which are included in said license information, and

the using unit includes a usage amount calculation unit operable to increment the number of actual uses recorded in the item of the usage amount by an amount of an actual use, every time the content is used.

10. The digital content distribution system according to Claim 1, wherein the license information includes at least a license information ID for identifying the license information, the first condition, the second condition and a content decryption key for decrypting an encrypted content which is permitted to be used based on the license information.

11. The digital content distribution system according to Claim 1, wherein the second condition generation unit includes a rule storage unit operable to previously store a rule for generating the second condition, and

the second condition generation unit generates the second condition according to the rule stored in the rule storage unit.

12. The digital content distribution system according to Claim 11,

wherein the rule is defined for each use right of each content, and

the second condition generation unit generates the second condition for each license information according to the rule.

13. The digital content distribution system according to Claim

11,

wherein the rule is defined uniformly for any use right, and
the second condition generation unit generates the second
condition uniformly for any license information according to the
5 rule.

14. The digital content distribution system according to Claim 1,
wherein the invalidity judgment unit judges whether the
license information is invalid or not every time power is applied to
10 the user terminal.

15. The digital content distribution system according to Claim
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wherein the invalidity judgment unit judges that the license
15 information is invalid when the maximum allowable number of uses
in the second condition is 0.

16. The digital content distribution system according to Claim
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20 wherein the invalidity judgment unit judges that the license
information is invalid when a value of an item of a usage amount
included in said license information is not less than a value of the
second condition, said usage amount being an item into which the
number of actual uses of the content is recorded with a default
25 value being 0 when the content is used based on the license
information.

17. A right management server connected with a user terminal
via a communication network for issuing license information to the
30 user terminal so that the user terminal obtains the license
information, said license information permitting a user to use a
content, said server comprising:

a first condition generation unit operable to generate a first condition based on a content use right owned by the user, said first condition being a condition for permitting the user to use the content;

5 a second condition generation unit operable to generate a second condition that indicates a part or all of the use permitted under the first condition and indicates whether the license information is valid or invalid based on a logical product of the first condition and said second condition;

10 a license generation unit operable to generate the license information including the first condition and the second condition in response to a license obtainment request from the user terminal; and

15 a license issuance unit operable to issue the generated license information to the user terminal so that said user terminal obtains said license information.

18. The right management server according to Claim 17, further comprising:

20 a return acceptance unit operable to accept, from the user terminal, return of the license information which is judged to be invalid;

25 an invalidation cancellation unit operable to cancel invalidation of the license information by updating the second condition included in the returned license information to a new value; and

 a reissuance unit operable to reissue, to the user terminal, the license information of which invalidation is cancelled.

30 19. The right management server according to Claim 18, wherein the second condition generation unit includes a rule storage unit operable to previously store a rule for generating the

second condition, and

the second condition generation unit generates the second condition according to the rule stored in the rule storage unit.

5 20. The right management server according to Claim 19,
 wherein the rule is defined for each use right of each content,
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 the second condition generation unit generates the second
condition for each license information according to the rule.

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21. The right management server according to Claim 19,
 wherein the rule is defined uniformly for any use right, and
 the second condition generation unit generates the second
condition uniformly for any license information according to the
15 rule.

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22. A user terminal connected with a right management server
via a communication network for obtaining license information
from the right management server and using a content based on
20 the obtained license information, said license information
permitting a user to use the content, said terminal comprising:

 a license obtainment requesting unit operable to request the
right management server to issue the license information so as to
obtain said license information;

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 an invalidity judgment unit operable to judge whether the
license information is invalid or not based on a first condition and
a second condition included in the obtained license information,
said first condition being a condition for permitting the user to use
the content based on a content use right owned by the user, said
30 second condition indicating a part or all of the use permitted under
the first condition and indicating whether the license information is
valid or invalid based on a logical product of the first condition and

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said second condition;

a using unit operable to provide the use of the content to the user when it is judged that the license information is not invalid; and

5 a license information returning unit operable to return the license information to the right management server when it is judged that the license information is invalid.

23. The user terminal according to Claim 22,
10 wherein the using unit includes a condition updating unit operable to update each of the first condition and the second condition to a new value obtained by subtracting a value of the use right which is consumed under the provision of the use, every time the content is used.

15 24. The user terminal according to Claim 22,
wherein the license information includes an item of a usage amount into which the number of actual uses of the content is recorded with a default value being 0, when the content is used
20 based on the license information,

the invalidity judgment unit judges whether the license information is invalid or not by comparing between a value of the second condition and a value of the item of the usage amount, both of which are included in said license information, and
25 the using unit includes a usage amount calculation unit operable to increment the number of actual uses recorded in the item of the usage amount by an amount of an actual use, every time the content is used.

30 25. The user terminal according to Claim 22,
wherein the invalidity judgment unit judges whether the license information is invalid or not based on the second condition

included in the license information, said second condition having been updated by the right management server, said license information having been returned and reissued.

5 26. The user terminal according to Claim 22,
 wherein the invalidity judgment unit judges whether the
license information is invalid or not every time power is applied to
the user terminal.

10 27. A right management method in a right management server
connected with a user terminal via a communication network for
issuing license information to the user terminal so that the user
terminal obtains the license information, said license information
15 permitting a user to use a content, said right management method
comprising:

 a first condition generation step of generating a first
condition based on a content use right owned by the user, said first
condition being a condition for permitting the user to use the
content;

20 a second condition generation step of generating a second
condition that indicates a part or all of the use permitted under the
first condition and indicates whether the license information is
valid or invalid based on a logical product of the first condition and
said second condition;

25 a license generation step of generating the license
information including the first condition and the second condition
in response to a license obtainment request from the user
terminal;

 a license issuance step of issuing the generated license
30 information to the user terminal so that said user terminal obtains
said license information;

 a return acceptance step of accepting, from the user

terminal, return of the license information which is judged to be invalid;

an invalidation cancellation step of canceling invalidation of the license information by updating the second condition included
5 in the returned license information to a new value; and

a reissuance step of reissuing, to the user terminal, the license information of which invalidation is cancelled.

28. A content using method in a user terminal connected with a
10 right management server via a communication network for obtaining license information from the right management server and using a content based on the obtained license information, said license information permitting a user to use the content, said content using method comprising:

15 a license obtainment requesting step of requesting the right management server to issue the license information so as to obtain said license information;

an invalidity judgment step of judging whether the license information is invalid or not based on a first condition and a second
20 condition included in the license information, said first condition being a condition for permitting the user to use the content based on a content use right owned by the user, said second condition indicating a part or all of the use permitted under the first condition and indicating whether the license information is valid or invalid
25 based on a logical product of the first condition and said second condition;

a using step of providing the use of the content to the user when it is judged that the license information is not invalid; and

a license information returning step of returning the license
30 information to the right management server when it is judged that the license information is invalid.

29. A program for a right management server connected with a user terminal via a communication network for issuing license information to the user terminal so that the user terminal obtains the license information, said license information permitting a user
5 to use a content, said program causing a computer to execute:

a first condition generation step of generating a first condition based on a content use right owned by the user, said first condition being a condition for permitting the user to use the content;

10 a second condition generation step of generating a second condition that indicates a part or all of the use permitted under the first condition and indicates whether the license information is valid or invalid based on a logical product of the first condition and said second condition;

15 a license generation step of generating the license information including the first condition and the second condition in response to a license obtainment request from the user terminal;

a license issuance step of issuing the generated license
20 information to the user terminal so that said user terminal obtains said license information;

a return acceptance step of accepting, from the user terminal, return of the license information which is judged to be invalid;

25 an invalidation cancellation step of canceling invalidation of the license information by updating the second condition included in the returned license information to a new value; and

a reissuance step of reissuing, to the user terminal, the license information of which invalidation is cancelled.

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30. A program for a user terminal connected with a right management server via a communication network for obtaining

license information from the right management server and using a content based on the obtained license information, said license information permitting a user to use the content, said program causing a computer to execute:

5 a license obtainment requesting step of requesting the right management server to issue the license information so as to obtain said license information;

 an invalidity judgment step of judging whether the license information is invalid or not based on a first condition and a second
10 condition included in the license information, said first condition being a condition for permitting the user to use the content based on a content use right owned by the user, said second condition indicating a part or all of the use permitted under the first condition and indicating whether the license information is valid or invalid
15 based on a logical product of the first condition and said second condition;

 a using step of providing the use of the content to the user when it is judged that the license information is not invalid; and

 a license information returning step of returning the license
20 information to the right management server when it is judged that the license information is invalid.